DOCUMENT RESUME

ED 470 125 IR 021 564

AUTHOR Yilmaz, Ozgul; Tuzun, Hakan

TITLE Web-Based Instruction: Instructor and Student Problems.

PUB DATE 2001-11-00

NOTE 9p.; In: Annual Proceedings of Selected Research and Development [and] Practice Papers Presented at the National Convention of the Association for Educational Communications and Technology (24th, Atlanta, GA, November 8-12, 2001). Volumes 1-2; see IR 021 504.

PUB TYPE Reports - Research (143) -- Speeches/Meeting Papers (150)

EDRS PRICE EDRS Price MF01/PC01 Plus Postage.

DESCRIPTORS Communication (Thought Transfer); *Computer Mediated Communication; *Distance Education; Instructional Effectiveness; Learner Controlled Instruction; *Peer Relationship; *Teacher Student Relationship; *Web Based Instruction; World Wide Web

ABSTRACT

In this study, instructor and student problems related to the Web-based instruction (WBI) were identified after examining their experiences. Interviews were used to collect the data. Semi-structured interview questions were asked in order to identify the problems related to the design, technology, support, management, student-centered learning, communication, and time from the perspective of students and instructors. Instructors' problems were found in the areas of support, communication with students, providing feedback, and handling the number of students. Students' problems were found in the areas of learning new tools, communication with classmates and instructors, and social aspects of learning. Results indicated that meeting at least once face-to-face before the course and providing an environment for an effective communication were important parameters for formalizing the interactions between students and instructors and also among the students themselves. In addition, it was found that the success of the WBI can be increased through: fostering dialog, participation, and interaction, formative assessment of assignments, increasing students' motivation, giving importance to student differences in learning, using active learning techniques and designing effective Web sites. (Contains 17 references.) (Author/AEF)

Reproductions supplied by EDRS are the best that can be made

ED 470 125

WEB-BASED INSTRUCTION:INSTRUCTOR AND STUDENT PROBLEMS

Ozgul Yilmaz
Hakan Tuzun
Indiana University Bloomington

Abstract

In this study instructor and student problems related to the Web-Based Instruction (WBI) were identified after examining their experiences. Interviewing technique was used to collect data. Semi-structured interview questions were asked in order to identify problems related to the design, technology, support, management, student-centered learning, communication, and time from the perspectives of students and instructors. Instructors' problems were found in the area of support, communication with students, providing feedback, and handling the number of students. Students' problems were found in the area of learning new tools, communication with classmates and instructors, and social aspects of learning. Results indicated that meeting at least once face-to-face before the course and providing environment for an effective communication were important parameters for formalizing the interaction between students and instructors and also among the students. In addition to this, it is also found that fostering dialog, participation, and interaction, formative assessment of assignments, increasing students' motivation, giving importance to student differences in learning, using active learning techniques, and designing effective web sites will increase the success of the WBI.

Introduction

Using the Internet for different purposes has entered a revolution to provide better communication among people during last two decades. Especially, after the development of the hyperlink on the World Wide Web (WWW), the Internet has offered more user-friendly environments (Starr, 1997). Researchers indicated that WWW is not only a communication medium for e-mail and document distribution but it is also a place to learn (Lightfoot, 1999; Mioduser, Nachmias, Lahav, & Oren, 2000). With the combination of the specifically designed software and pedagogical knowledge, WWW can provide an educational environment that maintains the knowledge building approach to learning. These understanding, technological developments in communication and WWW have been used as new opportunities for delivering instruction online. Thus, distance learning has emerged as an approach to education in the last few years (Yellen, 1998). Especially for graduate students, universities have started to offer their courses online (Barnard, 1997; Duchastel, 1997; Kearsley, Lynch, & Wizer, 1995). These practices in new educational agenda initiated some questions on researchers' mind. They started to identify how effectively online teaching has been delivered. According to Duchastel (1997), WWW have been used mostly to support the traditional model of university instruction. This approach resulted in the loss of potential of Web tools in teaching. To use the Web effectively in instruction, instruction should be transferred to Web totally and given by using web-based teaching approaches and technologies. Moreover, Duchastel (1997) also argued that models for transferring instruction to Web have not been determined definitely.

In addition to ways of delivering instruction online, researchers have also started to investigate the characteristics of online teaching, which affect the success of distance teaching (Mclsaac, Murphy, Games, & Igoe, 1989; Pisik, 1997; & Trentin, 1997). Mclsaac, et al. (1989) reviewed 62 articles and found that researchers have carried out their studies mainly on two broad categories: instruction and administration. Under the instruction category, researchers studied learning, attitude and dropout. Under the administration category, cost-effectiveness and courseware design were investigated. According to these researchers these two main categories and subcategories are the main characteristics of online teaching. It is emphasized that these characteristics should be considered carefully during design and delivery of the online courses.

Berge (1997) explored how teachers design and deliver online instruction for adults in a post secondary school. It was found that student-centered learning, self-reflection, discussion, collaboration, authentic learning, and online discussion are the most important characteristics of the online teaching. These parameters determine the success of the online teaching. According to Sheffield (1997) learner characteristics and the instructional strategies such as selecting and sequencing events and contents are the most important parameters in online teaching. Since the learners' characteristics impact the choice of instructional strategies and the subject matter of the course, instructors need to consider the diversity among the students. As opposed to traditional classroom, online classrooms combine the students whose cultural backgrounds are very different from each other. Teaching multicultural group is an inevitable aspect of the online instruction. Even though the parameters that affect the success of online teaching have been investigated from different perspectives, teaching through online courses created different problems for students and instructors. Lui and Thompson (1999) investigated how teaching simultaneously the same course in both a distance and a traditional educational format affects instructors and what the differences are between the two teaching styles. It was found that even though the instructor prepared the same teaching materials for distance and traditional classes, preparation of distance course materials were more time consuming than traditional one. Moreover, time management, monitoring students, and e-mail communication also took most of the instructor's time to provide effective teaching to distance students. In addition to instructors' problems, researchers have investigated the students' perspectives in comparing traditional teaching and online teaching. Results indicated that there are some advantages and disadvantages of learning online. In terms of advantages, students indicated that they have wait time before answering the questions or responding to the situations. In traditional classroom they

PERMISSION TO REPRODUCE AND DISSEMINATE THIS MATERIAL HAS BEEN GRANTED BY

P Harris

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

BEST COPY AVAILABLE

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

IR021564

were expected to give answer right after the questions are asked. In addition, they believed that with online teaching learning goes deeper and broader. There is no time constraint. They can study 24 hours a day. In terms of disadvantages, they found that the text-based communication creates a sense of isolation, misunderstanding, suspicion, and a lack of credibility (Herman, 1999 & Mory, Gambill, & Browning, 1998). In addition to these problems, Wulf, & Schinzel (1998) investigated the effectiveness of videoconferencing, telelecture, and telelearning. It was found that videoconferencing is not sufficient in quality transmission, telelecture reduces the students' attention and interactivity, and telelearning requires new effective instructional tools. Ozden & Cagiltay (2000) found that lecturing technique should not be preferred as an instructional method in WBI.

In this study, we explored WBI problems from two different approaches that are different from the previous studies. First, in the literature, it is observed that researchers investigated instructors' and students' problems separately. Those problems mostly related to one type of Web-based course and participants explained their problems related to that course. In other words, in each study, researchers concentrated on a single Web-based course and problems associated with that course from the students' or instructors' perspectives. With this study, we aimed to identify the problems associated with different Web-based courses and from both students' and instructors' perspectives in order to provide a more detailed and two sided information. Besides, we identified that problems related with support, learning new tools, feedback, class discussions, and group projects have not been identified in detail. We considered that these are very important characteristics of WBI and should be investigated thoroughly.

Methodology

Participants

In this study, two instructors and two graduate students from a large mid-western university were interviewed. Participants from both the instructor and the student groups were selected with purposeful sampling. Since the nature of this study is qualitative, participants were selected according to their previous experience with the WBI to get deep and broad understanding about their problems related to WBI. It was required for the instructor participants to teach at least one Web-based course and it was required for the student participants to take at least one Web-based course. Instructors and students were the members of the same university, but none of the participants had a relationship through the courses.

Both of the students were graduate students. They were doctoral students in science education department. They held full-time jobs as an Assistant Instructor (AI) at the same university. Both of them were comfortable with using the computers and the Internet both in their courses and in their daily lives.

Instructor1 was a non-native speaker of English and he was an AI in the Informatics department. He taught a Web-based course three years ago. The students took this course within another country while the instructor was in US.

Instructor2 was a native speaker of English and she was a faculty in an Instructional Systems Technology (IST) department. She had already finished the first nine weeks of her Web-based course when the interview was conducted. The students who took this course were the online master students and they were seeking for a master degree through a distance master program in an IST department.

Web-Based Courses

Student1 took a Web-based course as an elective, which was given in a semester. The main objective of the course was to teach the ways of using the Internet in K-12 schools. There was one instructor teaching the course.

Student2 took a Web-based course as an elective for her major in science education department. The course was offered in six weeks during the summer session. The purpose of the course was to teach incorporating technology into the instruction. There was one instructor teaching the course.

Instructor1 taught a course in which the purpose was to teach courseware design for computer mediated learning. The course was at the graduate level and 10 students took the course. The course was offered in an instructional technology department. There was another instructor for the course.

Instructor2 taught 2 courses. One of the courses aimed to provide an introduction to the field and profession of instructional technology. The other course provided information on the instructional design process. Both courses were at the graduate level and they were part of an online master's program. The courses were offered in an instructional technology department. There were 1 instructor and 10 students in the first course, 2 instructors and 18 students in the other course.

Data Collection

Semi-structured interview questions were used to collect interview data. Interviews were conducted over a one month period. Each interview session was treated as an individually constructed discourse between the researchers and the participant. Both open ended and probing questions were used to get deep information for categories determined before the interviews. Main categories included problems related to design, technology, support, management, student-centered learning, communication, and time. In addition to these categories four open-ended questions were asked independently to compare classroom teaching and online teaching. The questions for the instructors were:

- Which one is difficult classroom teaching or online teaching?
- Do you feel like facilitator or instructor?

And the questions for the students were:

- Which one is difficult, classroom learning or online learning?
- Do you like student-centered learning?

Data Analysis

The study called for an in-depth understanding of the experiences of participants involved in WBI. Instructors' and students' data were analyzed separately from each other. All data were transcribed from audiotapes for analysis. Then, researchers struggled to understand the context, discourse, and meaning behind the participant responses to determine the main areas about which respondents have problems with WBI. It was observed that participants did not have problems about some of the pre-determined categories. New categories for instructors were determined as support, communication with students, providing feedback, and handling the number of students. New categories for students were determined as learning new tools, communication with classmates and instructors, and social aspects of learning from students' perspectives. To increase the credibility of the study, participants' responses were coded by both researchers separately. Later, common themes accepted as the new emergent categories. In addition, the data obtained from the literature was used for detailed interpretation of the results.

Findings

Interview results with students and instructors will be presented under miscellaneous categories. First, instructors' problems while teaching Web-based courses will be presented. Then students' problems will be explained in detail. Finally, we will provide instructors' and students' preference in terms of classroom instruction or WBI.

1. Instructors' Problems with WBI

Instructors' problems and difficulties will be summarized in the following categories: Support, communication with students, providing feedback, and number of students.

1.1. Support

Feeling lonely and finding support when they are in need are the biggest problems for the instructors. Since they do not know what kind of problems they will have during the course, it is difficult for them to be prepared against these problems in advance. When they have problems, instructors need two types of support: technological support and design support for the revision of the course web site. If they do not have both kind of support on time, they spend most of their time to overcome these difficulties instead of preparing themselves for future instructions. Instructor2 indicated that she was not able to have a Macintosh computer (which she was used to using) and required software at the beginning. Because of the lack of technological support, she had a lot of communication problems with the students. She had to provide feedback much later than her planned time frame. She explained the design problems as the following:

> *Instructor2: ... The other big and huge problem was the sound in PowerPoint. ...So, you can go through the whole week then look how to fix it. That has been very time consuming for me. Probably more time consuming than any other thing that I have done for the course. I have been doing the redesign of the web pages and then going through and editing the lessons, [and] the visual parts of the lesson.*

Learning new software also creates problems for instructors if they learn them while giving Web-based courses. They need support from the people who know these software.

> *Researcher: How about learning new software?*
>
> *Instructor2: Yes, because I had to learn Dreamweaver and I did not have the application, so I needed to track down getting the application from one of my friends. Even though the documentation was written, it was brand new program for me. Thankfully one of my friends came in, and spent about 15 minutes with me kind of showing the basics to me.*

1.2. Communication with students

Having students involved in class discussions is really important for instructors to grasp an idea about student improvement, student learning, and student problems. However, both of the instructors indicated that having students involved in class discussions is not an easy task. Since most of the students prefer to study alone, they hardly respond to class discussions. In addition to the lack of participation in class discussions, most of them also do not send any response to their instructors.

> *Instructor2: Students are very intentional about their own learning. They are doing it and I think they would like to see more of it because they are kind of doing it on their own. ...In fact, there has not been very much interaction between them even though there has been a kind of mechanism for them to have some discussion. They do not respond to each other a lot. They are supposed to put these smaller type assignments up and comment on each others'. They are pretty good about putting up their own work, but only 2 or 3 students have consistently been commenting back to each other. And, many students never made any comment to anybody else. So there is not a lot of interaction going on in the course.*

Face to face communication is also necessary for WBI. Both of the instructors think that knowing students personally is important to get feedback. Talking to person without knowing puts distance between the two people. Both of the instructors felt this distance between them and their students. Instructor1 indicated that he lost one or two of the students during instruction. He believed that if he did a face-to-face talk with these students, he would be more helpful for them to solve their problems and make them believe not to drop the course. Instructor2 indicated the importance of the face-to-face interaction as:

> *Instructor2: I think one thing in distance environment that is different from our typical face-to-face courses is the informal interaction that often takes place either in the classroom or as they walk by in the hall. ...So, it is like there are some interactions [in web-based courses] that are missing.*

BEST COPY AVAILABLE

1.3. Providing Feedback

Instructors provide feedback to students' questions and assignments. Students ask their questions basically by sending e-mails. Any given day, instructors have lots of e-mails related to students' problems. Responding to each e-mail message on time is really time consuming for instructors and sometimes it is frustrating. Instructors feel pressure to check their e-mails very often because they believe the importance of timely feedback. Instructor1 indicated that students were expecting an immediate feedback from their instructor. Otherwise, the students believe that the instructor does not give importance to their e-mails. This feeling affects the students' performance. To prevent any negative student opinions, instructor2 tries to check her e-mail every hour and try to respond to them immediately. If the questions need detailed answers and the instructor does not have enough time to write long e-mails, she prefers to send a short e-mail to confirm the reception of the message and responds in detail later. Since all of the students in instructor1's class were taking the course from a different country, he changed his daily and nightly schedule according to students' time. He did not sleep until 4 am to provide feedback.

Grading students' assignments and providing feedback are also difficult duties for the course instructors. Instructor2 explains her opinions about this issue as:

Researcher: Are you having any feedback problems?

Instructor2: Yes, just getting it done. I have a nightmare last night. I feel terrible about that. Because I feel timely feedback is important. So, not to have the feedback within reasonable time, like a week turnaround, bothers me a great deal. I literally had nightmares all last night thinking. I kept up waking up to see if I have got the feedback. So it bothers me a lot and it bothers them a lot. They keep asking "when you are gonna get things graded". So, it is definitely an issue in [Distance Education] class.

Instructor2 also indicated that she did not feel comfortable even though she graded and returned student assignments on time because she felt that some of the students were suffering from silence. She expected the students would reflect their ideas about their grades. Some of the students did so. But some of the students preferred to remain silent. She really wanted to get response from each student to make sure that they were happy with their grades.

Both of the instructors agreed that the hours spent for a three-credit course is more than a face-to-face course. Instructor2 emphasized the hard work she put with the following phrase:

Instructor2: I really do work 16 hours a day and 7 days a week and every day since school started.

1.4. Number of Students

Instructors argued that number of students is important to provide effective instruction to them. According to the instructors, 10 to 15 students is ideal class size for WBI. Instructor2 hired an additional graduate assistant to grade students' assignments on time. She felt that otherwise she would not be able to finish grading students' assignments.

2. Students' Problems with WBI

Interview results indicated that students have wide range of difficulties while taking Web-based courses. In this paper, students' problems and difficulties are summarized under the following categories: learning new tools-novelty effect, communication with classmates and instructors (class discussions, group projects, and feedback), and isolated learning.

2.1. Learning New Tools: Novelty Effect

Both of the students indicated that they had to learn new tools such as software, uploading files, chat communication through Oncourse or Sitescape, and etc. These new tools were not easy for them to learn at first when they were introduced to the online environment. Learning a new way of communication has created chaos at first, but in time students got used to it. However, learning to use new software to finish projects was really painful for students. It takes time and extra effort to learn new software. Students believe that during this process, face-to-face instruction is necessary to increase their effectiveness of doing their project. One of the students indicated that software learning was not part of the instruction. Instructor of the course expected from students to learn different software to do their assignments. However, learning new software and application of this knowledge to the assignments are not easy for a student if he/she is taking the course online. At first, students feel lonely and confused a little bit in finding resources or people who can help on that. Sending e-mail to the instructors to learn the new software is not the best solution at this point. The following part of the interview depicts the second student's problems with learning new software:

Researcher: What about software?

Student2: Yes, so I had to learn a lot of programs with that. Flash... I had to do some video editing. Dreamweaver... so I had learned them on my own. I got some help at the technology lab.

Researcher: You told that you had to learn Flash and you got help from a center. How was that help? Was it related to the course? Was it part of the course?

Student2: It was external. You are bringing up a good point; it would be more helpful if there was a help center in our faculty. They just expected us we had to learn this stuff. Not a student, but someone else told me about technology center... I still feel guilty going there. I felt bad asking them questions, because I really thought my course should have been setup to help the students. I would give my ideas.

One of the students also indicated that trying to learn new software is scary at first, even though accomplishing this task was not difficult.

Researcher: What about learning new software?

Student1: I had to learn how to use notepad to do my html. I had not used notepad before. So, I think it was assumed that everybody had used notepad before, and I was like what do I do? So I had to figure that out on my own and it turned to be really easy but it was a little scary at first, like just trying to use something for the first time.

2.2. Communication with Classmates and Instructors

Class discussions, group projects, and feedback are the main way of communication for students to share their ideas with their classmates and instructors. In this part, problems with class discussions, group projects, and feedback will be given in three different categories.

2.2.1 Class Discussions

During the class discussion, since most of the students actively participating in the discussion ask their questions at the same time, students have difficulty in following the flow of the discussion. In time, they get bored and quit writing their responses and asking questions. It is very difficult for students and instructors to create an environment helpful for their learning and teaching.

Student1: ... And then when we used the live chat, which happened through Oncourse, somebody would post a comment and all of us would respond to it. But it took so much time to response to a post, in the meanwhile another response would come up, we could lose the chain of conservation because everybody was seemed to be engaged with a bunch of different conversations, it did not flow. Like, you say something, I say something, and he says something. There were all postings out of sequence. So, that was frustrating. We even talked about in the discussion like "woo I cannot track of this" you know, too many people are saying too many things at once.

In addition to this chaos, the students also indicated that time issue was problematic for the communication. Generally, since there is no meeting time for WBI like in face-to-face instruction, students study at their own pace and respond to the activities according to their available time. Some of the students prefer to study during night and some of them prefer to study during the day. These working schedules create difficulty in finding common time for class discussions. Due to these problems, some of the students prefer not to attend to class discussions. Interestingly, in this study, both of the students indicated that they did not have a computer at home. They have used the university's computers. For some class discussions, one of the students needed to go to school without considering the time.

Student1: Several students could not make the live chat sessions. We tried to schedule the live chat and it was very difficult to get a good time. We ended up making it very late; actually I had to go up to the school at night, sit around and do this thing.

Because of having difficulties in following the chat and finding a suitable time for the chat sessions, students think that class discussions are not helpful for their learning.

Student1: There really was not a lot of discussion. It almost seemed like because the discussion was so awkward and unnatural compared to just face-to-face interaction, I almost fell a desire to just do the course independently, like do it myself.

2.2.2. Group Projects

The main problem in doing group projects is to communicate effectively with the group members. Since the main communication method is e-mail, it is difficult to respond to the e-mail messages immediately after they are received. Delay in e-mail response time makes the partners frustrated and they perceive it as the waste of time. Students believe that face-to-face communication during group projects helps them to find quick solutions to their problems and ask questions and have answers directly without a delay.

Student1: ... I am always checking and replying. That's [e-mail] like a primary form of communication for you. And for a lot of other classmates, it is not. It was frustrating for me to send an e-mail and not getting immediate response or at least getting a response that day. To not hear from the people for two days after I send them e-mail when I am supposed to working with them on something. So, I kind of felt like waitingggg. Hellooo. Like, answer my e-mail. So that was frustrating.

Since students do not want to take other persons' time, they try to check their e-mail more often than they do usually. Students feel pressure on themselves to check their e-mail whenever they find time and a computer. Because of this pressure, even though they do not want to think anything about the course, they force themselves to check their e-mail and respond to them accordingly. They feel like they have to work on their group members' schedule and not their own schedule. In time, the course becomes a part of their daily life.

Student2: ... Just like in meeting, you have that time you know you can ask these questions, and talk about things. When you do not have these meetings the question is always going on. I do not like that as much... And you know some weekends, I do not have to think about the course but I get e-mails from people and you cannot always work the same schedule with someone else.

2.2.3. Feedback

Students usually take their feedback from instructors and classmates during courses. For WBI, students feel like responses and feedback from classmates are not as informative for them. Students have difficulty in giving credibility to classmates' opinions. Student1 indicated difficulty in trusting people if she does not know them. Because of this reason, she gave importance to instructors' feedback rather than classmates' feedback. In addition to that, student2 emphasized that most of the students did

not have enough time to spend for other persons' problems. Instead, they are spending their time to find solutions to their own problems. This belief also decreases the effectiveness of the communication among the students. Students perceive the course instructor as the only resource to get information and to find answers to their questions. However, thinking like that is not the solution for students' problems. Students do not feel free to ask questions to the instructors at any time. Instructors post a time limit for students on when they should expect a response. Student2 felt herself guilty when she sent an e-mail outside of this time limit because she thought that she was taking instructor's time and disturbing him.

In face-to-face communication it is easy for instructors to follow their students' learning and provide feedback when it is necessary. In WBI, instructors can do so only if students send e-mails or responds to classroom discussion. Most of the time, this situation creates problems for doing assignments. Students want instructor feedback when they work on their assignments or projects. For WBI, students are expected to send their final version of projects. Both student1 and student2 felt that they did not get any feedback for their studies during their work. Also, their instructors did not return their final projects with the feedback. They thought that this way of grading and submission was not helpful for their learning. Since they did not know their strengths and weaknesses, they were not sure whether they were successful or not on achieving course objectives. This situation is more problematic for students who are not comfortable with asking questions to instructors to get feedback for their assignments. Sending everything on due date and having nothing but the grade makes students frustrated.

> *Student2: ...because you could not ask clarification questions. We were not able to ask [like in traditional class] for her to say "oh you make sure you do this part of the assignment." It was a huge project that was hard to imagine the entire time that was involved. It would have been nice if it had little check points on the web like "oh you need to turn this part" instead of it was like everything was due at the end.*

> *Student1: I would like to get more feedback along the way I was doing my project. Like creating my web page. I would like to be able to submit it, get some feedback then go back and change it. Improve it and be graded on it. Whereas we submitted it, we read everybody's comment and got a grade. A big part of the grade was coming from this project.*

2.3. Isolated Learning

Doing collaborative work or group projects in WBI is difficult for students. Because of the difficulty in finding time for group work and giving importance to just instructors' feedback make students isolated during the course taking. The primary reason for students to take WBI is the time flexibility. They do not have to be in the classroom at certain times. So, they can take these courses when they work. This is another reason for the isolation of students from collaborative work.

> *Student1: I like to work with groups sometimes. It depends on if your schedules can match up like in face-to-face classes. With this one, I am glad that we had individual assignments versus group assignments. I think group assignments would be way too difficult to coordinate because people are online at different times. I would do my things during the week and then not online during the weekend. So, there are a lot of people doing it (classroom teachers) at the weekend. So, we always missed each other.*

In face-to-face communication students have a chance to get to know each other and to develop trust for their classmates. Student1 indicated that since she did not know the people, it was hard for her to develop trust for them. Students do not care about other students' learning, ideas, and difficulties. Their purpose is to finish the course at their own pace. They do not want anyone to disturb their comfort. Student2 said that she had a difficulty in learning different software such as Flash. However, she did not request for help from anybody in her class. She thought that everybody should have spent their time for their assignments. They did not have time to teach Flash to any other classmate. In her opinion, it was the instructor's responsibility to help students with learning new software. When she asked for help to this problem from her instructor, the instructor sent an informative web site. However, she had difficulty in finding answers to her questions. Finally, she decided to find an external support for her problems. She further indicated that too much student-centered learning makes students isolated. There should be more instruction and guidance provided by instructors. Interestingly, student2 also felt that her instructor was isolated and her teaching style was also an isolated type.

> *Researcher: Do you think it is the duty of the instructor to find solutions to your problems?*
> *Student2: Yes, what was she doing? I do not know what she did all semester. It bugged me. I did not see her taking time out to organize anything. It is obvious to me that there should have been help sessions.*

According to students, instructors are not aware of students' problems. Sometimes as the result of the student e-mails, instructors are informed about the problems. In most cases instructors send information such as a useful web site or a detailed e-mail message to help students. However, students indicate that some of the problems are difficult to solve with these information. Students still have questions in their minds and reading information through web sites or through e-mail still do not answer their questions. They need face-to-face interaction with instructors not only for asking questions but also for discussing the ideas related to their problems and for getting immediate help.

3. Responses to Open Ended Questions

At the end of each interview session, two questions were asked to identify instructor and student preferences for classroom instruction and WBI.

3.1. Which One is Difficult Classroom Teaching or Online Teaching?

There are some advantages and disadvantages for classroom and Web-based teaching. Because of this, instructors had difficulty in choosing just one type.

> *Instructor2...because it (WBI) is new and because it is unfamiliar both to instructors and learners, it is harder and more time consuming. So if someone says I could teach either way, I would probably choose the classroom, because I know how it is done, the students know how it is done. I can do it more quickly and easily. But that isn't to say that I do not think there is good place for online learning. I actually think that there is and I think it allows us just to do things and have opportunities that we could not have otherwise. But I think face-to-face is definitely easier. It is easier to prepare for; it is easier to deal with every way. The other is just more time consuming [for the instructor].*

3.2. Which One is Difficult Classroom Learning or Online Learning?

Even though student1 had positive and negative ideas about both, student2 definitely preferred the classroom teaching.

> *Student1: I think it depends on the subject matter. Our class dealt with the Internet itself. It was appropriate in a way. But I could imagine if we were doing something like teaching methods class, then it would have been ridiculous to try to do that online. I think for some courses you have to interact face-to-face with other people and actively do versus doing on your own and submitting.*
>
> *Student2: I think learning online is more difficult. If you are in the classroom, teacher is talking so you know what information is important or what you need to know, whereas on the web it is just like there is so much stuff that sometimes it is hard to know what is the most important thing. Are they all important?*

3.3. Do You Feel Like a Facilitator or Instructor?

Both of the instructors felt themselves as a facilitator.

3.4. Do You Like Student-Centered Learning?

Student2 indicated that student centered learning isolated students and make learning more individual. Student1 liked the individual learning since it provides her to arrange her daily schedule according to other tasks.

> *Students2: It was too student centered. I think that can be bad, really bad because it makes you isolated, you need to have a little bit more instruction, or guidance.*

Conclusions and Recommendations

In general, both students and instructors have problems on similar issues such as communication, feedback, and support. It is clear that solving problems of instructors might be helpful in solving students' problems or vice versa. For any Web-based class, face-to-face interaction should be held at least once at the beginning of the course to help instructors and students to get to know each other. Since the technology is developing very fast and making the hardware and software cheaper, Web-based video conferencing can be an option for those who cannot attend face-to-face interaction.

For instructors, technological support should be provided on time and when it is needed. Computers and software are the only way to communicate with students. If instructors have difficulty in obtaining this support on time, their communication with students can be disastrous. Students can easily drop the course just because of this.

Application of different instructional methods can be helpful for increasing students' motivation and interest toward WBI. In addition to this, spending time for preparing instructional materials by considering differences in learning style and diversity in class can make students think that their instructors are spending time for teaching the course. Since the time spent for solving course problems by instructors is invisible to students, they think that their instructors are doing nothing to help them in their learning. In face-to-face teaching, instructors give importance to apply different teaching methods according to students' difficulties. Application of the same strategy in WBI would be helpful for both instructors and students.

Formative assessment is another missing part in WBI. According to Buchanan (1999), feedback given as in the form of continuous formative assessment might help students to monitor and evaluate their progress. At the same time, this approach can help instructors to see the students' difficulties and provide immediate feedback when it is necessary. Another benefit of the formative assessment might be increasing the communication between instructor and students.

In face-to-face classroom, instructors have advantages in understanding students' difficulties while observing them in classroom. In online teaching, there is no chance for instructors to do this. However, instructors can do this observation by sending e-mails to students to learn their difficulties instead of waiting e-mails from them. Some of the students can prefer to stay silence in WBI but instructors' e-mails can make them feel that their instructors are taking care of their progress and difficulties. This approach can also be helpful in preventing student dropout.

To foster dialog, participation, and interaction, instructors need to find activities to increase students' involvement in group working and discussions.

References

Bardner, J. 1997. The World Wide Web and higher education: The promise of virtual universities and online libraries. *Educational Technology, 37*(3), 30-35.

Berge, Z. (1997). Characteristics of online teaching in post-secondary, formal education. *Educational Technology, 37*(3), 35-47.

Buchanan, T. 1999. Using the World Wide Web for formative assessment. Journal of Educational Technology Systems, 27(1), 71-79.

Duchastel, P. (1997) A web based model foe university instruction. *Journal of Educational System Technology, 25*(3), 221-228.

Herman, L., Ige, G., Duryae, L. McCarver, P., & Good, K. 1999. Difficulties bring Wisdom: Online learners learn how online communities learn. National Educational Computing Conference Proceeding, 20th, Atlantic City, NJ. (ED 432 989)

Kearsley, G., Lynch, W., & Wizer, D. 1995. The effectiveness and impact of online learning in graduate education. *Educational Technology, 35*(6), 37-42.

Lightfoot, J.M. 1999. A blue print for using the World Wide Web as an interactive tool. *Journal of Educational Technology Systems, 27*(4), 325-335.

Lui, Y., & Thompson, D. 1999. Teaching the same course via distance and traditional education: A case study. (ED 434 602)

Mclssac, M.S., Murphy, K.L., Games, W., & Igoe, A. 1989. Research in distance education: Methods and results. Proceedings of Selected Research Papers Presented at the Annual Meeting of the Association for Educational Communication and Technology, Dallas, TX. (ED 308 827)

Mioduser, D., Nachmias, R., Lahav, O., & Oren, A. 2000. Web-based learning environments: Current pedagogical and technological state. *Journal of Research on Computing in Education, 33*(1), 55-76.

Ozden, M.Y., & Cagiltay, K. 2000. Running behind the best pedagogy to develop a telematised teaching environment: A case study between Turkey and the USA. (ED 439 697)

Pisik, G.B. 1997. Is this course instructionally sound? A guide to evaluating online training courses. *Educational Technology, 37*(4), 50-59.

Sheffield, C.J. 1997. Instructional technology for teachers: Preparation for classroom diversity. *Educational Technology, 37*(2), 16-18.

Starr, R.M. 1997. Delivering instruction on the World Wide Web: Overview and basic design principles. *Educational Technology, 37*(3), 7-14.

Trentin, G. 1997. Logical communication structures for network based educational tele-teaching. *Educational Technology, 37*(4), 19-25.

Wulf, V, & Schinzel, B. 1998. Lecture and tutorial via the Internet- Experiences from a pilot project connecting five universities. TELECOM 98 World Conference on Educational Multimedia and Hypermedia & World Conference on Educational Telecommunicatiobs. Proceedings. 10th, Freiburg, Germany.

Yellen, R.E. 1998. Distant learning students: A comparison with traditional studies. *Journal of Educational Technology Systems, 26*(3), 215-224.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

NOTICE

Reproduction Basis

X	This document is covered by a signed "Reproduction Release (Blanket)" form (on file within the ERIC system), encompassing all or classes of documents from its source organization and, therefore, does not require a "Specific Document" Release form.
	This document is Federally-funded, or carries its own permission to reproduce, or is otherwise in the public domain and, therefore, may be reproduced by ERIC without a signed Reproduction Release form (either "Specific Document" or "Blanket").